



In re PATENT APPLICATION of

Attorney Docket: 39021-172671

AMENDMENT

CUSTOMER NO. 26694



U.S. PATENT &amp; TRADEMARK OFFICE

Sir:

Please amend the above-identified application as follows:

IN THE CLAIMS:

3. (amended) A method according to one claim 1, characterized in that the grain has a cylindrical structure with a diameter to length ratio of between 0.5 and 2.0, an outside diameter between 0.5 and 10 mm and, in particular, contains at least one hole, preferably several holes, with a hole diameter between 0.03 and 0.7 mm.

5.(amended) A method according to claim 1, characterized in that a diffusion depth in the range of 100-500  $\mu\text{m}$  is generated.

6.(amended) A method according to claim 1, characterized in that a solution or emulsion of the high-energy plasticizer in an organic solvent is added to a mixture of untreated green powder in water, which is followed by the admixture of a solution or emulsion of the deterrent in water, wherein preferably the admixture of the solution or emulsion of the high-energy plasticizer in an organic solvent and the solution or emulsion of the deterrent in water occurs at a temperature between 20-85 °C.

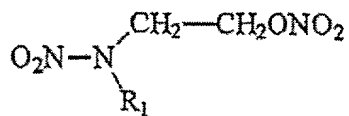
8.(amended) A method according to claim 6, characterized in that the green powder is placed into 1 to 5 times the amount by weight of water.

9. (amended) A method according to claim 6, characterized in that once the process of adding the solution or emulsion of the deterrent is completed, the pressure in the reactor tank is reduced to 400-800 mbar during a period

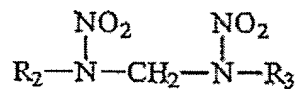
of 2-6 hours and the remaining liquid components are allowed to drain out through a strainer in the bottom of the reactor and that the resulting powder mass is dried with warm air.

10. (amended) A method according to claim 1, characterized in that 0.01-2% graphite is added in a polishing drum to the dried powder mass to obtain a bulk propellant powder with a bulk density > 1000 g/l.

11. (amended) A method according to claim 1, characterized in that the high-energy plasticizer is nitroglycerine or diethylene glycol dinitrate or, in particular, is provided with the structure I or II with  $R_1 = C_1-C_{10}$ -alkyl,  $C_1-C_{10}$ -alkoxy or aryl,  $R_2$  and  $R_3$  independent of each other  $C_1-C_5$ -alkyl or  $C_1-C_5$ -alkoxy and is used in amounts of 5-20% relative to the green powder.



(I)



(II)

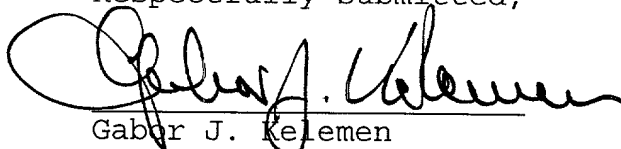
13. (amended) A method according to claim 1, characterized in that an organic ether and ester compound with a molecular weight of between 100-100'000 is used as polymeric deterrent.

Attached hereto is a marked-up version of the changes to the claims by the current Amendment. The attached page is captioned "Version with markings to show changes made".

REMARKS

The purpose of this Preliminary Amendment is to eliminate the multiple dependency of the claims.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

**IN THE CLAIMS:**

Claims 3, 5, 6, 8, 9, 10, 11 and 13 have been amended as follows:

3. (amended) A method according to ~~one of the claims 1~~  
~~or 2~~ claim 1, characterized in that the grain has a  
cylindrical structure with a diameter to length ratio of  
between 0.5 and 2.0, an outside diameter between 0.5 and 10  
mm and, in particular, contains at least one hole, preferably  
several holes, with a hole diameter between 0.03 and 0.7 mm.

5. (amended) A method according to ~~one of the claims 1~~  
~~to 4~~ claim 1, characterized in that a diffusion depth in the  
range of 100-500  $\mu\text{m}$  is generated.

6. (amended) A method according to ~~one of the claims 1~~  
~~to 5~~ claim 1, characterized in that a solution or emulsion of  
the high-energy plasticizer in an organic solvent is added to  
a mixture of untreated green powder in water, which is  
followed by the admixture of a solution or emulsion of the  
deterrent in water, wherein preferably the admixture of the

solution or emulsion of the high-energy plasticizer in an organic solvent and the solution or emulsion of the deterrent in water occurs at a temperature between 20-85 °C.

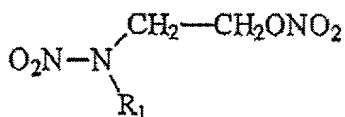
8. (amended) A method according to ~~one of the claims 6 or 7~~ claim 6, characterized in that the green powder is placed into 1 to 5 times the amount by weight of water.

9. (amended) A method according to ~~one of the claims 6 to 8~~ claim 6, characterized in that once the process of adding the solution or emulsion of the deterrent is completed, the pressure in the reactor tank is reduced to 400-800 mbar during a period of 2-6 hours and the remaining liquid components are allowed to drain out through a strainer in the bottom of the reactor and that the resulting powder mass is dried with warm air.

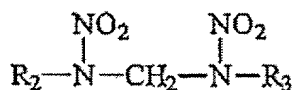
10. (amended) A method according to ~~one of the claims 1 to 9~~ claim 1, characterized in that 0.01-2% graphite is added in a polishing drum to the dried powder mass to obtain a bulk propellant powder with a bulk density > 1000 g/l.

11. (amended) A method according to ~~one of the claims 1 to 10~~ claim 1, characterized in that the high-energy

plasticizer is nitroglycerine or diethylene glycol dinitrate or, in particular, is provided with the structure I or II with  $R_1 = C_1-C_{10}$ -alkyl,  $C_1-C_{10}$ -alkoxy or aryl,  $R_2$  and  $R_3$  independent of each other  $C_1-C_5$ -alkyl or  $C_1-C_5$ -alkoxy and is used in amounts of 5-20% relative to the green powder.



(I)



(II)

13. (amended) A method according to ~~one of the claims 1 to 12~~ claim 1, characterized in that an organic ether and ester compound with a molecular weight of between 100-100'000 is used as polymeric deterrent.